REMARKS

In view of the following remarks, Applicant respectfully requests reconsideration and allowance of the subject application. This amendment is believed to be fully responsive to all issues raised in the November 7, 2003 Office Action.

As stated above, the specification is amended at the Abstract and at page 23, line 3; claims 1, 6-10, 12 and 18 are currently amended; and claims 4, 5 and 11 are cancelled. Accordingly, claims 1-3, 6-10, 12-13 and 18-19 are pending.

The amendment to the specification at the Abstract reduced the number of words to 150 or less. See MPEP §608.01(b). The amendment to the specification at page 23, line 3 was to correct an inadvertent typographical error.

Claim 1

Claim 1 is directed to a heat exchanger and, as currently amended, recites, in part, a support structure that "*comprises a tie rod having a planar section that thermally deforms to accommodate variations in the size of the core*". The underlined language was originally presented in claim 5, which depended on claim 1. Claim 5 is now cancelled.

In the Office Action mailed November 7, 2003, the Office rejected claim 1 under 35 U.S.C. §102(a) as being anticipated by U.S. Patent No. 4,697,633 to

Darragh et al. (Darragh reference). Applicant notes that the Darragh reference does not disclose a support structure that comprises a tie rod having a planar section. For at least this reason, Applicant submits that claim 1 is now patentable over the Darragh reference and should therefore be allowed.

Applicant also notes that claim 5 was not rejected as being anticipated by the Darragh reference. Hence, claim 1 as currently amended substantially represents claim 5 rewritten in independent form. In this regard, the subject matter of claim 1 as currently amended is patentable over the Darragh reference.

In the Office Action mailed November 7, 2003, the Office also rejected claim 1 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,328,098 to Kodumudi et al. (Kodumudi reference), filed November 10, 1998 and issued December 11, 2001. Applicant asserts that this rejection is improper because the Kodumudi reference does not disclose each claim limitation of claim 1, as originally presented or as currently amended.

Pursuant to §102, each claim limitation must be found in a single prior art reference. Apple Computer, Inc. v. Articulate Systems, Inc., 234 F.3d 14, 20 (Fed. Cir. 2000). Hence, omission of any claimed element, no matter how insubstantial, is grounds for traversing a rejection based on §102. Connell v. Sears, Roebuck & Co., 722 F.2d 1542 (Fed. Cir. 1983). Further, a reference must enable one of skill in the art to make the anticipating subject matter, thus

placing the disclosed subject matter in the possession of the public. Scripps Clinic & Research Fdn. v. Genentech, Inc., 927 F.2d 1565, 1576 (Fed. Cir. 1991). Consequently, if a cited reference is not enabling of anticipating subject matter, that subject matter cannot be used as a basis for a §102 rejection.

Claim 1 as originally presented recited:

A heat exchanger comprising:

a. a core having a thermally variable size; and

b. a support structure connected to the core,

wherein the support structure thermally deforms to accommodate variations in the size of the core.

The Kodumudi reference does not disclose a heat exchanger that includes a support structure that thermally deforms to accommodate variation in the size of a core. Further, the Kodumudi reference would not enable one of skill in the art to arrive at the subject matter of original claim 1.

The Kodumudi reference discloses a side member that "is adapted to preferentially break under low tension" (see, e.g., Abstract of Kodumudi reference) by having "a region of reduced structural integrity" (col. 2, lines 14-15), "a region of weakness" (col. 2, line 10), etc. As shown in Fig. 1 of the Kodumudi reference, a radiator (item 10) has a pair of such side members or spacer members (item 2) to space apart a pair of headers (item 3) each associated with a respective radiator tank (item 6). The spacer members of the Kodumudi reference have regions with V-shapes for responding to changes in

tension. There is no indication that these V-shaped regions are designed to deform thermally to accommodate variations in size or dimension of the radiator. Instead, they probably act as mechanical elements that fail under low tension in response to other radiator components that may experience thermal deformation (e.g., expansion). Hence, Applicant fails to see why one of ordinary skill in the art would look to the Kodumudi reference or, even if one looked to the Kodumudi reference, how it would enable one to arrive at a support structure that thermally deforms to accommodate variations in the size of a heat exchanger core.

Applicant respectfully submits that the Kodumudi reference does not anticipate the subject matter of claim 1 as originally presented and a fortiori does not anticipate the subject matter of claim 1 as currently amended, which may be considered as essentially claim 5 rewritten in independent form. In this regard, Applicant asserts that the current amendment to claim 1 does not alter the scope of claim 1 with regard to the Kodumudi reference.

In conclusion, for at least the foregoing reasons, Applicant respectfully requests allowance of claim 1 as currently amended.

Claims 2-3, 6-9

Claims 2-3 and 6-9 depend on claim 1 and are therefore patentable for at least the reasons presented with respect to claim 1. In conclusion, Applicant respectfully requests allowance of claims 2-3 and 6-9.

Claim 10

Claim 10 is directed to a heat exchanger and, as currently amended, recites, in part, "*a tie rod having a planar section*". The underlined language was originally presented in claim 11, which depended on claim 10. Claim 11 is now cancelled. Claim 10 as currently amended further recites the tie rod "*capable of applying a compressive load to the strongbacks*" to help clarify the function of the tie rod.

In the Office Action mailed November 7, 2003, the Office rejected claim 10 under 35 U.S.C. §102(a) as being anticipated by U.S. Patent No. 4,697,633 to Darragh et al. (Darragh reference). Applicant notes that the Darragh reference does not disclose a support structure that comprises a tie rod having a planar section. For at least this reason, Applicant submits that claim 10 is now patentable over the Darragh reference and should therefore be allowed.

Applicant also notes that claim 11 was not rejected as being anticipated by the Darragh reference. Hence, claim 10 as currently amended substantially represents claim 11 rewritten in independent form. In this regard, the subject matter of claim 10 as currently amended is patentable over the Darragh reference.

In the Office Action mailed November 7, 2003, the Office also rejected claim 10 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,328,098 to Kodumudi et al. (Kodumudi reference), filed November 10, 1998

and issued December 11, 2001. Applicant asserts that this rejection is improper because the Kodumudi reference does not disclose each claim limitation of claim 10, as originally presented or as currently amended.

Pursuant to §102, each claim limitation must be found in a single prior art reference. Apple Computer, Inc. v. Articulate Systems, Inc., 234 F.3d 14, 20 (Fed. Cir. 2000). Hence, omission of any claimed element, no matter how insubstantial, is grounds for traversing a rejection based on §102. Connell v. Sears, Roebuck & Co., 722 F.2d 1542 (Fed. Cir. 1983). Further, a reference must enable one of skill in the art to make the anticipating subject matter, thus placing the disclosed subject matter in the possession of the public. Scripps Clinic & Research Fdn. v. Genentech, Inc., 927 F.2d 1565, 1576 (Fed. Cir. 1991). Consequently, if a cited reference is not enabling of anticipating subject matter, that subject matter cannot be used as a basis for a §102 rejection.

Claim 10 as originally presented recited:

A heat exchanger comprising:

a. a core having a first end and an opposing second end; and

b. a support structure, wherein the core is received by the support structure, wherein the support structure comprises:

i. a first strongback adjacent to the first end of the core;

ii. a second strongback adjacent the second end of the core; and

iii. a variable thickness tie rod mounted between the first strongback and the second strongback.

As described in the instant specification, with reference to Figure 5a, "[T]he tie rods 150a and the strongbacks 143 and 145 (as well as the shell 160) carry compressive loads applied to the stack 130" (page 11, lines 6-8) and "[T]he tie rods 150a function to apply a compressive load to the strongbacks 143 and 145" (page 10, lines 30-31). This language helps give functional meaning to the terms tie rod and strongback.

The Kodumudi reference does not disclose a heat exchanger that includes a support structure that includes a variable thickness tie rod mounted between a first strongback and a second strongback that is capable of applying a compressive load to the strongbacks. Further, the Kodumudi reference would not enable one of skill in the art to arrive at the subject matter of original claim 10.

The Kodumudi reference discloses a side member that "is adapted to preferentially break under low tension" (see, e.g., Abstract of Kodumudi reference) by having "a region of reduced structural integrity" (col. 2, lines 14-15), "a region of weakness" (col. 2, line 10), etc. As shown in Fig. 1 of the Kodumudi reference, a radiator (item 10) has a pair of such side members or spacer members (item 2) to space apart a pair of headers (item 3) each

associated with a respective radiator tank (item 6). The spacer members of the Kodumudi reference have regions with V-shapes for responding to changes in tension. There is no indication that these V-shaped regions are capable of applying a compressive load to any component of the radiator. Instead, they probably act as mechanical elements that fail under low tension in response to other radiator components that may experience deformation (e.g., expansion). Hence, Applicant fails to see why one of ordinary skill in the art would look to the Kodumudi reference or, even if one looked to the Kodumudi reference, how it would enable one to arrive at a support structure that accommodates variations in the size of a heat exchanger core while still being capable of compressive loads.

Applicant respectfully submits that the Kodumudi reference does not anticipate the subject matter of claim 10 as originally presented and a fortiori does not anticipate the subject matter of claim 10 as currently amended. In this regard, Applicant asserts that the current amendment to claim 10 does not alter the scope of claim 10 with regard to the Kodumudi reference.

In conclusion, for at least the foregoing reasons, Applicant respectfully requests allowance of claim 10 as currently amended.

Claims 12-13, 18-19

Claims 12-13 and 18-19 depend on claim 10 and are therefore patentable for at least the reasons presented with respect to claim 10. In

conclusion, Applicant respectfully requests allowance of claims 12-13 and 16-19.

Conclusion

Pending claims 1-3, 6-10, 12-13 and 18-19 are believed to be in condition for allowance. Applicant respectfully requests reconsideration and prompt issuance of the present application. Should any issue remain that prevents immediate issuance of the application, the Examiner is encouraged to contact the undersigned attorney to discuss the unresolved issue.

Respectfully Submitted,

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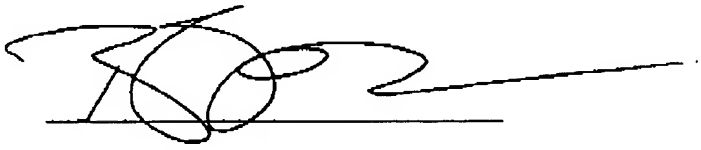
Dated: 2/9/04



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